AMENDMENT TO THE CLAIMS

Please cancel claims 1-32 and substitute new claims 33-43. Upon entry of the amendment, the claims status is:

Claims 1-32: (cancelled)

Claim 33: (new) A system for refining the design of a mechanical assembly including:

a self-updating library database associated with white body model information derived from separate sources having discrete functional identities involved in the enterprise development of a mechanical assembly;

menu selectable sources of virtual simulation model database information within the library distributable among members of enterprise design, assembly and simulation testing task groups, wherein each member is distinctly associated with a specialized design, assembly and simulation department of the enterprise involved in the development of a mechanical assembly;

a plurality of work stations associated with the design, assembly and simulation departments, each work station 1) associated with at least one of the individual members of the design, assembly and simulation task groups and 2) physically located apart from the library database;

separate data files and separate program functions stored in a retrievable format assembled in one or more menu lists, the lists: 1) identifying a model of a mechanical

assembly to be simulated; 2) identifying, with respect to the assembly to be simulated, parts of the assembly, characteristics of the parts, connections capable of use with the parts, and characteristics of the connections used with the assembly; and 3) identifying database files associated with the parts, connections and characteristics;

the library including a master record database wherein separate data files and separate program functions are maintained, the data files and program functions being accessible by a task group member from a work station upon the selection of a data file and program function from a menu;

a network linking the work stations and the master record database;

one or more menu associated with the data files and program functions, the menu accessible at a work station and including functions for selecting from the menu the parts to be conjoined in a simulation assembly model, and, upon the selection of the parts, directing a central processor in the library to 1) retrieve the data files associated with the parts; 2) associate the parts and the characteristics of the parts retrieved; 3) select one or more connection joining the parts; 4) retrieve the data files from the library associated with the one or more connection selected; 5) associate the characteristics of the one or more connection selected with parts in a simulation assembly model wherein the selected parts are conjoined by the connection selected; 6) process the parts through a mesh mechanism; 7) save the mesh data in the master record database; 8) build the simulation model; 9) translate data associated with the model as built into a data record having a virtual simulation format; 10) select a simulation of the model to be evaluated; 11) record the data record of the characteristics of the simulation model upon the performance of the virtual simulation; and 12) create, upon the completion of the

virtual simulation, as a discrete menu list item for selection from the library database, the data record of the simulation model and the characteristics of the simulation of the model such that a task group member can select and retrieve from the library database the discrete data file records associated with the model evaluated;

whereby successive data files of models evaluated are preserved in a continuous loop with respect to refinements and the data files of modified models become accessible for subsequent use.

Claim 34: (new) The system of claim 33 further including a continually updated data loop among the work stations and the library whereby a data file record of the characteristics of the simulation model and the results of the simulation performed upon the model are maintained such that the data record of the model and the characteristics of the simulation replace in the library any previous data file record associated with a previous rendition of the simulation model and the characteristics of the previous rendition.

Claim 35: (new) The system of claim 34 wherein the data file of the simulation model includes data concerning crash impact, durability and noise characteristics of the model retrievable at the work stations of the task group members associated in the enterprise development of a mechanical assembly.

Claim 36: (new) The system of claim 33 wherein menu selectable data files in the library database list include connections comprising welds, bonds, bolts, sealers, adhesives, pin joints, and ball joints.

Claim 37: (new) The system of claim 33 wherein the menu accessible from the work stations includes a list from which a program function associated with a mesh part database is selected.

Claim 38: (new) The system of claim 34 wherein a work station accessible to an enterprise group member includes a limited menu restricting the access of the work station to an individual assigned to a distinct design, assembly or simulation department of the enterprise to one or more processing functions selected from the group of: 1) selecting and retrieving parts and the data files associated with characteristics of the parts; 2) associating in a simulation model the selected parts and the characteristics of the parts; 3) selecting a connection and retrieving the data files associated with characteristics of the connection; 4) associating the characteristics of the connection selected with the parts selected in a simulation model wherein the selected parts are to be conjoined, 5) processing the connections and parts through a mesh mechanism; 6) saving the mesh data in a database; 7) building the simulation model and translating data associated with the model into a data record having a virtual simulation format; 8) performing a virtual simulation of the model and recording a data record of the characteristics of the simulation; and 9) compiling the data record of the simulation

model and the characteristics of the simulation in a format retrievable as a menu item in the library.

Claim 39: (new) A continuous loop data library for refining the design of a white body model from the beginning of a design process to the end of a design process for a simulation model of a mechanical assembly comprising:

a central self updating library database that includes a menu selectable list of parts data records, CAD data, mesh data, parts connection data, parts assembly data, stock parts data, and parts evaluation data;

individual sources of simulation model information related to the discrete categories of design, assembly and simulation of a white body, the information sources separately accessible to distinct design, assembly and simulation testing groups of an enterprise wherein members of each group are separately associated with the design, assembly and simulation functions of the enterprise involved in the development of a mechanical assembly;

a plurality of work stations, each work station located apart from the library database, the work stations interconnected with the library in a spoke network with respect to a central library hub wherein the work stations are uniquely accessible by individual members of separate design, assembly and simulation groups involved, respectively, in correspondence with the design, assembly and simulation testing responsibilities group members with regard to the white body model;

a limited menu at each work station restricting a member's access to the library at a work station in accordance with a member's association with a design, assembly or

simulation group to functions associated with menu categories comprising: 1) selecting parts and retrieving the data files associated with the selected parts; 2) associating the selected parts and the characteristics of the parts selected with the mechanical assembly to provide a model; 3) selecting a connection for associating parts to be joined with each other from the library and retrieving data files from the library associated with the connection; 4) associating the characteristics of the connection selected with the selected parts and processing the associated connection and parts through a mesh process to provide an assembly mesh; 5) saving data associated with the assembly mesh in a database; 6) building a white body model and translating the model into a data record; 7) performing a virtual simulation of the model; 8) recording a data record of the characteristics of the simulation; 8) returning the data record of the model and the characteristics of the virtual simulation of the model to the library; and 9) upon the completion of a virtual simulation of the white body model, replacing any prior record in the library of the mechanical assembly model simulated with a record of the model created and the characteristics of the simulation of the model processed;

whereby successive data files of models evaluated are preserved in a continuous loop with respect to refinements and the data files of modified models become accessible for subsequent use.

Claim 40: (new) The system of claim 33 wherein, in the process of building the white body model and associating mesh and connection data relating to the manner in which conjoined parts are joined in the assembly, imperfections in the mesh, are identified and fixed before a virtual simulation of the model is performed.

Claim 41: (new) The system of claim 33 wherein, upon the approval of the results of a white body model simulation by the task group, the assembly simulated is fixed as a final design in the library

Claim 42: (new) The system of claim 39 wherein, in the process of building the white body model and associating mesh and connection data relating to the manner in which conjoined parts are joined in the assembly, imperfections in the mesh, are identified and fixed before a virtual simulation of the model is performed.

Claim 43: (new) The system of claim 39 wherein, upon the approval of the results of a white body model simulation by the task group, the assembly simulated is fixed as a final design in the library